

The CEMEX approach to Biodiversity Conservation

The **CEMEX** – BirdLife Biodiversity Action Plan Standard



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CEMEX & BirdLife International: partnering to conserve biodiversity

In CEMEX, we publically recognise our commitment to be a responsible steward of the land we manage and to conduct activities in a sustainable manner. To this end, in 2007, we began a global partnership with BirdLife International. CEMEX and BirdLife share a common vision of achieving environmentally sustainable development; both recognise the business case for integrating biodiversity conservation into daily operations.

The partnership demonstrates that corporates and NGOs with compatible aims and interests can generate significant gains, for both business and biodiversity, by working together. CEMEX realises that biodiversity conservation is integral to building a sustainable future.

The rationale for the CEMEX approach

The Biodiversity Action Plan (BAP) guidance is designed to help CEMEX operations develop BAPs for their operations, regardless of their location, proximity to areas with high biodiversity value or experience in biodiversity management.

It is a systematic approach to guide sites in the process of evaluating the necessity of biodiversity actions and, for those sites where BAPs are currently in place, to identify if all recommended elements of a BAP are being covered.



Each site's location has its own unique characteristics, with its own set of biodiversity conservation-related issues and potential. Therefore the BAP guidance focuses on the general process recommended to be used in preparing and implementing a BAP, rather than on a prescriptive method that may be difficult to apply at different CEMEX sites. This approach offers the flexibility to address each particular need in a way that is appropriate to each specific situation.



Overview of the CEMEX - BirdLife Biodiversity Action Plan

Biodiversity is the variety of life on Earth. In this overview of the CEMEX approach to biodiversity management, when we talk about biodiversity we are essentially talking about wildlife: species, from birds to butterflies, and the ecosystems that they form a part of, from deserts to wetlands.

The aim of a Biodiversity Action Plan is at minimum to achieve no net loss of biodiversity and, at best, to achieve a lasting and overall positive impact on biodiversity, compared to the state prior to when operations began. This plan provides an opportunity to enhance biodiversity in and around a CEMEX site, ultimately benefiting people and wildlife over a long period.

Stages in the CEMEX – BirdLife Biodiversity Action Plan

Stage	Summary
1. Gather essential information	The protocol for producing a site Biodiversity Action Plan first requires a desk based assessment of the site, detailing important legal considerations such as protected areas that may be affected by the quarry.
2. Partners	Partners, for example, BirdLife Partners can help CEMEX by providing a vital delivery role.
3. People perspective	This section aims to help ensure the quarry is legally compliant. People and their perspectives (stakeholders) are fundamental to the success or failure of a BAP.
4. Initiate wildlife surveys	Conduct surveys of all wildlife, from birds and butterflies to plants and reptiles.
5. Identify important species and habitats	The most threatened – irreplaceable or vulnerable – species and habitats are flagged up.
6. Determine actions and objectives	Key actions and objectives are identified to protect or enhance conditions for priority species and habitats.
7. Implement actions	Essentially putting the plan - the actions and objectives identified in the previous stage - into action.
8. Evaluate success, report progress	Towards the end of the first phase of work, the process of reviewing progress and reporting successes should begin.

About biodiversity

The variety of life

Biodiversity is the variety of life on Earth. It is the diversity of different life forms, from the level of genes, species and between the level of whole ecosystems. It is a term that attempts to capture all of the interrelationships between life and non-living processes. Methods exist that use quantified approaches to systematically describe the variety of plant and animal species in an area.

Intrinsic value

As recognised by the 1992 Convention on Biological Diversity, biodiversity has an intrinsic value to us, we therefore have an ethical responsibility to conserve it. It also benefits us immensely; exposure to natural places can lead to positive mental health outcomes, for example a view of nature from a window can increase the rate of recovery from illness (Ulrich 1984) and exercising in green spaces can improve self-esteem (Barton & Pretty 2010).

Interconnections

All life is interconnected and humans are as much a thread in the fabric of life as other species. Perturbations to natural systems, for example through the introduction of invasive non-native species or through land use change, can disrupt these connections and reduce species diversity resulting in homogeneity.



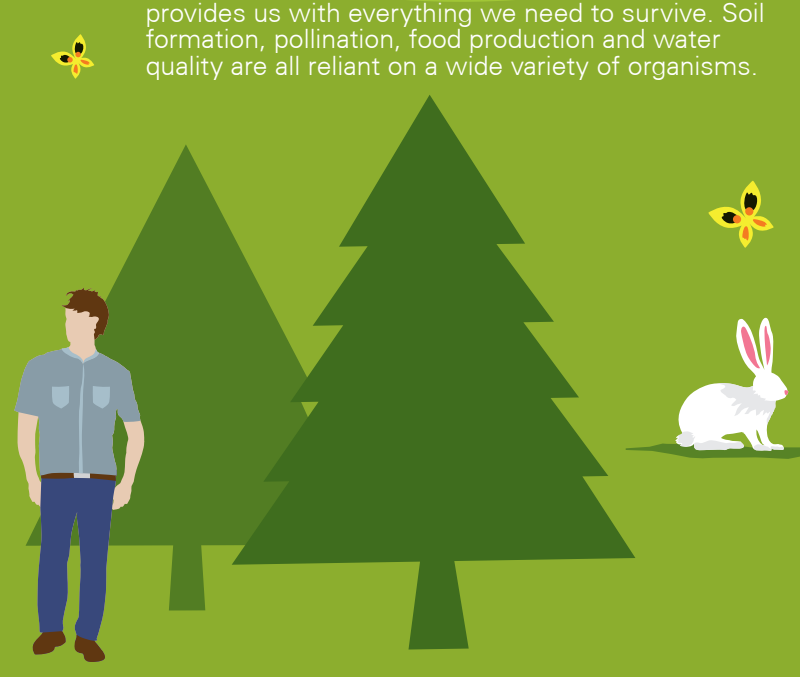
Healthy ecosystems

Ecosystems are ecological units made up of a complex system of interactions between living communities (plants, animal, fungi, and microorganisms) and the environment they live in (MEA 2005).

Intact ecosystems are more resilient, or more able to absorb disturbance without shifting to an alternative state and losing function and services, than disturbed ecosystems (Côté & Darling, 2010). Habitat transformation contributes to species loss, reduced population sizes and truncated distributions (Sanderson et. al., 2006). Restoration can sometimes reverse the impacts of habitat transformation; but some habitats and ecosystems are irreplaceable, such as ancient woodland and karst systems.

How is biodiversity faring?

Biodiversity loss is one of the major challenges of the 21st Century. There is scientific consensus that we have now entered the “sixth major mass extinction” event (Leakey and Lewin 1996), species are being lost at an ever accelerating rate. Society, governments and businesses are increasingly recognising the need to reverse this trend, but much more effort is needed by all to stem the loss of biodiversity.



Essential for life

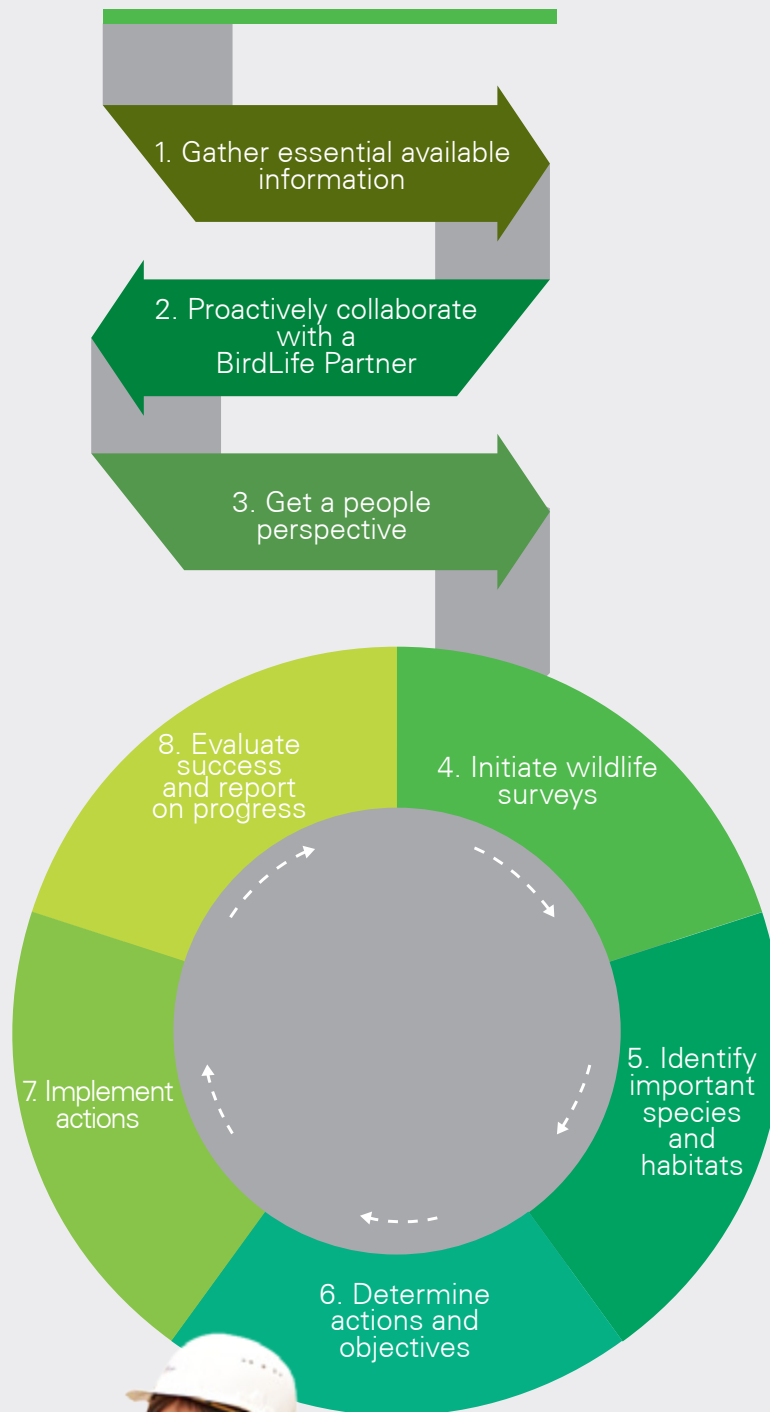
Biodiversity is essential for human survival: we depend on it. Directly and indirectly, biodiversity provides us with everything we need to survive. Soil formation, pollination, food production and water quality are all reliant on a wide variety of organisms.



The cost of saving nature

Biodiversity must be conserved because of its intrinsic value and because humans depend on it. Saving nature is not an expensive exercise, in fact, it has been estimated to be small when compared to the estimated economic value of the services it provides (McCarthy et. al. 2012).

BAP planning process cycle



Diagrammatic representation of the BAP planning process cycle: a Biodiversity Action Plan is essentially a tool to conserve or enhance biodiversity. There are a number of processes involved, highlighted here, each involving different people from within CEMEX and also potentially outside the company such as conservationists from within the BirdLife Partnership.

1. Getting started with the BAP

When preparing to undertake a Biodiversity Action Plan, it is important to collate information about the site before getting going. Much of this can be done from the office, using sources like the CEMEX – BirdLife Scoping Study, reviewing EIAs, or using web-based information such as from BirdLife Partner or BirdLife International databases.

Creating a Biodiversity Action Plan is an organic process; this stage is about preparation: what do we need to know, where do we find it, who will seek it out, how will it be resourced? It is an opportunity to gather a good overview of information before proceeding.

This stage is important and something CEMEX can lead on early on in the process. It can help ensure the success, efficiency and ease of the BAP process in the future.

This stage is an opportunity for:

- The appointment of a Biodiversity Leader to manage these processes.
- Involving as many key people as possible; development of staff hierarchies outlining responsibilities with regards to BAP delivery.

Expected Outcomes:

Initial biodiversity assessment: A desk-based literature report and internet search on the biodiversity status within and around the site; visits and familiarity with the site and surrounding area

Legalities: Compliance of the site with the identified relevant biodiversity-relevant rules and regulations

Resources: What are the available financial and capacity resources for biodiversity action and how will they be managed?



Who will be involved?

External conservation
NGO or expert partner

CEMEX Managers

CEMEX employees,
NGOs, local Government

Researchers

Designate a “biodiversity
leader”

Malaysia: Bukit Tambun quarry – Malaysian Nature Society & CEMEX Malaysia: Detailed desk-based assessment



The BAP project in Malaysia differs from the other BAP Pilots in that the site - CEMEX Bukit Tambun quarry, Penang region - neither sits within nor adjacent to an area of high biodiversity value. A well understood principle held by the CEMEX – BirdLife Partnership is that since BirdLife Partners’ main focus is the conservation of Important Bird Areas (IBA), projects must have an IBA conservation component to secure cross-partnership buy-in.

The CEMEX Bukit Tambun quarry, where hard rock is extracted for local distribution, is leased from a private landowner. The third party land ownership potentially limits options to leave a more positive impact on biodiversity on-site than prior to when operations began. However, it doesn’t limit scope for CEMEX to leave a net positive impact on biodiversity off-site in the wider landscape, particularly since much of Penang continues to suffer from historic and on-going habitat loss and degradation.

To begin addressing these challenges, the partnership initially focused on the desk-based assessment, collating historical bird data, external land use information and analysing threats to priority terrestrial bird survey sites and the nearest IBA to the quarry, the Teluk Air Tawar IBA. Meanwhile, biodiversity surveys of Penang’s key sites began, including at this IBA; a stretch of inter-tidal wetland and an essential stopover site for migratory shorebirds, including globally threatened bird species such as Nordmann’s Greenshank and Lesser Adjutant.



2. Proactively collaborate with a BirdLife Partner

CEMEX has a global partnership with BirdLife International. BirdLife has national BirdLife Partners in 117 countries worldwide, some of whom may have an interest in working with CEMEX. In this sense, a BirdLife Partner is different to but can also be a stakeholder (see next section). Partners are expert, independent nature conservation organisations affiliated with or part of the BirdLife network that can share local, cultural and scientific knowledge.

Objective: engage with BirdLife Partners wherever possible

Through its partnership with BirdLife, CEMEX is able to optimise available expertise and resources of Partners, where available, through collaboration; sharing and aligning goals. These partnerships can have wider benefits for both parties.



Cerrito Blanco, Mexico – Pronatura & CEMEX Mexico: Working with local stakeholders

The Sistema de Sierras de la Sierra Madre Occidental IBA, situated in the Mexican Sonoran Desert, is an area of exceptionally high biodiversity value and home to more than 350 bird species. The high biodiversity value is also represented by the 2000 or so native plant species, over 20 amphibian species, circa 100 reptiles and 30 native freshwater fish.

CEMEX Mexico's Cerrito Blanco quarry adjoins this IBA, rendering it a priority for the CEMEX – BirdLife Global Programme. A Partnership between Pronatura and CEMEX Mexico began in 2012 to address the risks and opportunities presented by the site's location.

So far, desk-based literature reviews and field-based studies have identified priority species and habitats in particular need of protection and enhancement. For example, the use of explosives – necessary for operations – has been identified as an activity that will need modulating in order to protect Golden Eagle nests proximal to the site.

An emerging component of the BAP is the stakeholder engagement phase of the project, in addition to CEMEX site staff, local landowners and other stakeholders are being engaged such that widespread threats to biodiversity, not necessarily linked to CEMEX's operations are being addressed too, such as overgrazing.



3. People perspective: who are the stakeholders and how can they be engaged?

This stage is about *identifying* individuals and groups potentially affected by or who can affect the Biodiversity Action Plan. Stakeholders can have various perspectives on nature issues and these must be appreciated and understood.

Appropriately *engaging* with stakeholders from the outset helps build trust, brings in expertise, manages expectations, avoids conflict and is vital to the success of the BAP in the future. Some stakeholders, such as those that have knowledge or experience in nature conservation, could even become Partners.

Objectives:

Identify and analyse potential stakeholders with respect to their perspectives on biodiversity and sustainability issues

Continually engage with them from the start (share information, consult)

Learn as much as possible from stakeholders about local biodiversity issues

Bear in mind: The need to manage expectations especially with regards to biodiversity response time. Also consider people's varying perspectives could both affect and enrich the BAP

4. Discover the wildlife on your doorstep

The aim here is to figure out what wildlife is in the area around and on the site, understand how it is faring and identify potential threats and opportunities.

When conducting the biodiversity survey, engaging and including the expertise of stakeholders and partners will be beneficial; transparency is key.

Who will be involved?

NGO Conservation Officer

CEMEX site manager

CEMEX Environment lead

Objectives:

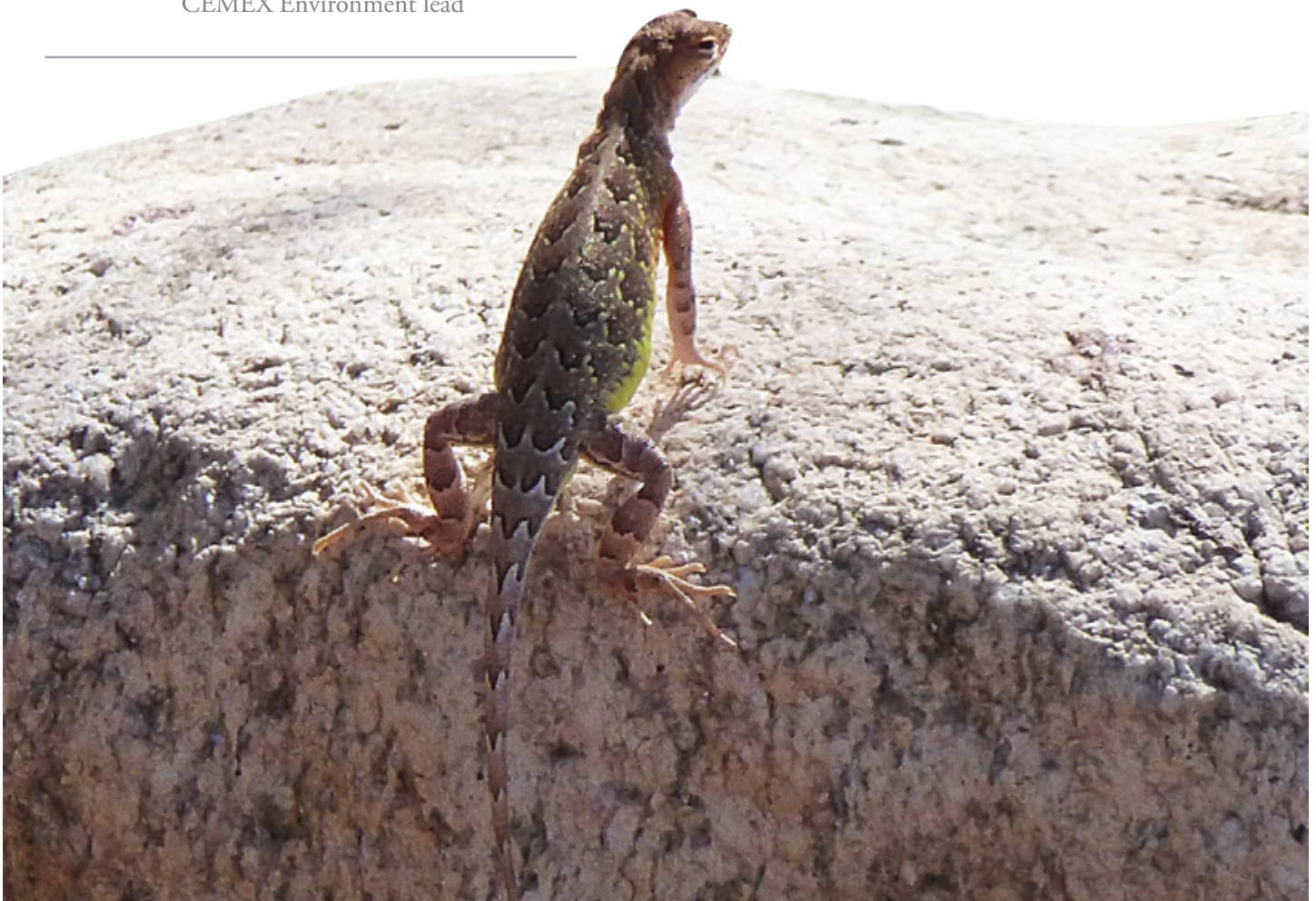
Conduct a systematic baseline survey of biodiversity, including at different times of year where seasonality is evident

Assess the risks and opportunities for biodiversity, conducting a biodiversity impact assessment

Consolidate information and share it with Partners and stakeholders

Enjoy being outside and experiencing nature!

Bear in mind: Ways to engage people with the wildlife in the area



5. Prioritising irreplaceable and vulnerable wildlife

Once it becomes known what biodiversity occurs in and around the site, the next step is to determine which species and habitats require action. Typically, the most vulnerable, irreplaceable species and habitats are prioritised. There is also an opportunity to look at important 'services' an ecosystem provides to local people (e.g. water regulation and purification). The aim here is to give the BAP a focus, identify any risks to mitigate and opportunities to enhance nature.

Objectives:

Prioritise animal and plant species, and habitats as well as key services nature provides to people locally and more widely; incorporate national and local perspectives; some species will be important locally, some nationally, some internationally

Bear in mind: Expertise and scientific knowledge from partners and stakeholders; maintain a broad perspective: a species which may not seem vulnerable locally may have immense global significance; ecosystems interactions are complex: species don't recognise boundaries and action may need to be taken beyond the site-level

Who will be involved?

Conservation Partners,
Stakeholders,
CEMEX
Biodiversity leads



6. Planning action for biodiversity

Next it is time to plan the BAP, with the overarching aims of preventing biodiversity loss and creating opportunities for biodiversity enhancement. By identifying clear, manageable and prioritised objectives, and maintaining involvement with stakeholders, the BAP will be able to proceed effectively over the coming months and years, and become something that will happily sit alongside existing site protocols.

Know what skills and resources you have available to implement the BAP to ensure effective biodiversity management is realised in the long term. Ensure everyone involved knows what their tasks are, and the resources that are available for them to achieve such tasks.

From the outset, identify appropriate indicators and monitoring tools that can be used to measure the ongoing progress of the BAP.

Who will be involved?

NGO Conservation expert

CEMEX site manager

Relevant stakeholders

Objectives:

Set clear objectives for the BAP, including enhancement opportunities for habitats

Organise these into a prioritised action plan

Allocate resources and responsibilities

Identify indicators and tools to monitor the efficiency of biodiversity actions

Engage with key stakeholders

Bear in mind: Biodiversity improvements will happen at different rates for different species, appreciate time-lags when planning targets

Useful partner expertise and scientific knowledge

Complex interactions of ecosystems

Opportunities to engage the public and raise awareness about biodiversity when BAP actions are underway



7. Implementation

Align prioritised objectives from Stage 6 with CEMEX procedures, then proceed to implement the BAP and start to protect and enhance some biodiversity.



Case
Study

Spain – Soto Pajares – CEMEX Spain & SEO/BirdLife – Actions!



SEO/BirdLife

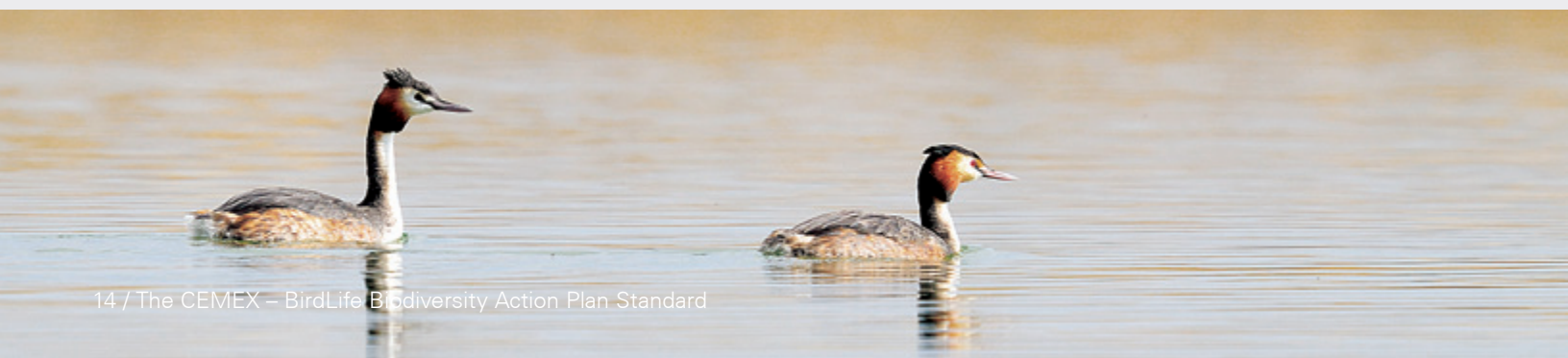
The Spanish BirdLife Partner (SEO/BirdLife), a local NGO (Grupo Naumanni) and CEMEX Spain are collaborating on a conservation project informed by the CEMEX – BirdLife Biodiversity Action Plan Standard developed in 2011.

In 2012, the project partners developed a biodiversity baseline for Soto Pajares, a CEMEX quarry that delivers aggregates to the market in Madrid, Spain, identifying and prioritizing habitats and appropriate measures to protect or enhance priority species and habitats.

SEO/BirdLife and Grupo Naumanni then teamed-up to review risks and opportunities and develop priority actions for implementation at the site in 2013.

Actions ranged from measures to control invasive species, steps to increase inter-lake connectivity of an on-site reed bed, and educational activities for the promotion of wildlife to local communities.

CEMEX national operations played a key role in the BAP process, coordinating both partners as well as reviewing and agreeing actions and next steps with them. CEMEX will continue to support and encourage the project as it enters the next exciting stage of action implementation.



8. Gathering momentum: monitoring progress of the BAP process

With the BAP now underway, the process must be monitored, tracked and (if required) adjusted, according to any challenges that are identified, or to biodiversity responses that arise from implemented actions.

This stage is also about keeping track of progress and it should be maintained throughout the BAP process. Utilise both internal (CEMEX) and external (partners and stakeholders) communications in order to maintain enthusiasm for the BAP. The BAP will now become an ongoing process within the site's environmental management system.

Externally reporting on BAP progression is an important way to communicate to key audiences (such as local communities and government) the positive approaches CEMEX takes with others in order to protect and enhance wildlife wherever CEMEX works.

Who will be involved?

Everyone identified in previous stages

Objectives:

Monitor progress of the BAP and biodiversity status with reference to the baseline

Review budget and performance against objectives

Determine suitable tracking variables to monitor (with partners/stakeholders)

Evaluate success against targets, identifying problems

Communicate regularly with partners and stakeholders to manage expectations

Report internally (the first step, engaging, informal to formal) and externally (develop mechanisms for reporting, case studies, etc.)

Bear in mind: Biodiversity improvements will happen at different rates for different species, so appreciate timescales when reviewing targets

Engaging partner & stakeholders: transparency with plans is key to continued support

Ways to engage the public for biodiversity awareness, for example educational institutions to allow/assist in researching activities



Following implementation of the BAP



APPENDIX

Glossary of terms

Appendix 1: Glossary of terms

Biodiversity: biological diversity for short - the variety of life on Earth. It is a term that attempts to capture all of the inter-relationships between life and non-living processes, yet can be measured practically when describing the variety of plant and animal species in an area. It is the abundance of different life forms, from the level of genes, through to species and the level of whole ecosystems. Biodiversity, essentially, equals nature. Usage, for example: "Mexico is more biodiverse than Greenland." "The Peruvian rainforest is beautiful in part because of its high biodiversity."

Diversity: a measure of how different (varied) things are.

Ecosystem: a biological community of interacting organisms and their physical environment. In each ecosystem, living species are part of a whole, interacting with not only other species, but also with the air, water and soil that surround them. Humans are part of ecosystems, just like any other animal species.

Ecosystem services: the resources, features and processes that are provided by natural ecosystems to the benefit of mankind, such as clean drinking water, crop pollination, etc.

Endemic species: a species that is only found in a particular site, region or country.

Habitat: the natural and physical space that an organism needs to survive.

Karst system: Limestone formations - sedimentary rocks that were built up millions of years ago by corals, shells, algae, and other marine organisms.

NGO: Non-Governmental Organisation; a non-profit coordinated citizen's group, task-orientated with a common interest and organised locally, nationally or internationally.

Partner: expert independent nature conservation organisations affiliated with BirdLife that can share local, cultural and scientific knowledge, e.g. Pronatura (BirdLife in Mexico), Malaysian Nature Society (BirdLife in Malaysia). The BirdLife Partnership consists of BirdLife and its 117 Partners worldwide. A Partner is a stakeholder with a particular interest in CEMEX activities due to the CEMEX-BirdLife partnership.

Rehabilitation: improving a habitat to a state that may not have existed before.

Restoration: returning a habitat to its previous state, prior to being damaged.

Species: a group of organisms that can interbreed and produce viable offspring- for example Peregrine Falcon, *Falco peregrinus*, a cliff-nesting bird of prey, Desert Sunflower *Geraea canescens*, a flowering plant and the Western Diamond Rattle snake *Crotalus atrox*, the latter two occupy the Sonora Desert ecoregion.

Stakeholder: individuals or groups who see themselves affected by the Biodiversity Action Plan, and who can affect it. They can have positive or negative perspectives on CEMEX biodiversity activities or decisions.

BirdLife Partnership: see Partner.

EIA: Environmental Impact Assessment is essentially an information gathering exercise which should provide an understanding of the environmental affects of a development. An important thing about environmental assessments is the emphasis on using the best available sources

of objective information and in carrying out a systematic process. The Environmental Statement (ES) is the main output from an EIA. Guidance on EIAs can be found from the International Finance Corporation here: <http://ow.ly/ffhAX>

Appendix 2: CEMEX - BirdLife BAP Standard list of stages

Stage 1: Prerequisites
Stage 2: Partners
Stage 3: Stakeholders mapping and engagement
Stage 4: Development of the biodiversity baseline
Stage 5: Prioritization
Stage 6: Action plan: Objectives and targets
Stage 7: Implementation
Stage 8: Monitoring, evaluation and reporting

Appendix 3: References

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